

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of cooling a workpiece during grinding ~~a glass workpiece~~ with a rotating grinding wheel, comprising the steps of directing in-which liquid nitrogen ~~is directed~~ towards the surface of the workpiece glass or the edge of the wheel or into the region immediately in the vicinity of the wheel and workpiece point of contact for the purpose of cooling the wheel and workpiece.
2. (Currently Amended) A method as claimed in claim 1 wherein the workpiece is glass and the grinding wheel acts to grind a flat ~~or profiled~~ surface of the workpiece.
3. (Original) A method of grinding as claimed in claim 1 wherein the workpiece is a glass plate, the grinding wheel acts to grind the edge of the plate, and the liquid nitrogen is directed towards the edge of the glass, or the edge of the wheel, or into the nip between the workpiece and the rotating grinding wheel.
4. (Currently Amended) A method as claimed in ~~any of claims 1 to~~ claim 3 wherein the workpiece is rotated during grinding.

5. (Currently Amended) A grinding machine for ~~performing the method of any of claims 1 to 4~~ grinding a workpiece, the grinding machine comprising:

- 1-) a machine bed,
- 2-) a workpiece holder,
- 3-) a workpiece drive ~~means~~ for moving the workpiece holder and a workpiece carried thereon
- 4-) a grinding wheel,
- 5-) a grinding wheel drive by which the grinding wheel is rotated,
- 6-) a wheelhead carrying the wheel ~~and drive therefor~~,
- 7-) a slideway by which the wheelhead can move relative to the workpiece,
- 8-) a wheelhead drive ~~means~~ for moving the wheelhead,
- 9-) a source of liquid nitrogen,
- 10-) ~~valve means and~~ a pipeline ~~means~~ communicating between the source of liquid nitrogen and a nozzle,
- 11-) a nozzle drive ~~means~~ for positioning the nozzle relative to the wheel and workpiece, and
- 12-) a control system ~~for controlling the operation of each of the drive means and the valve means~~ to supply liquid nitrogen to the grinding region during grinding and to ~~control the nozzle drive means during grinding so as to~~

move the nozzle to direct liquid nitrogen during grinding towards the region of grinding contact between the wheel and workpiece.

6. **(Currently Amended)** A grinding machine by which a workpiece is ground by engagement with a rotating grinding wheel, comprising a workpiece support, a grinding wheel, a grinding wheel drive ~~means~~ ~~therefor~~, and a wheelhead and drive for moving the wheelhead and therefore the wheel relative to the workpiece, a source of liquid nitrogen under pressure, a valve ~~means~~ for controlling the supply of liquid nitrogen therefrom to a nozzle ~~means~~, and an adjustable support ~~means~~ adapted to position the nozzle ~~means~~ in the vicinity of the grinding wheel ~~so as in use, when the valve means is open~~, to direct liquid nitrogen towards the wheel or the workpiece or directly towards the point of contact between the wheel and workpiece, and to reduce the heat generated by the grinding engagement of the wheel and workpiece.
7. **(Currently Amended)** A grinding machine as claimed in claim 6 wherein a work support drive ~~means~~ is provided for moving the workpiece support relative to the wheel during grinding to progressively present different parts of the workpiece ~~surface~~ to the wheel.

8. **(Currently Amended)** A grinding machine as claimed in claim ~~6 or~~ 7 further comprising a rotational drive ~~means~~ for rotating the workpiece during grinding.
9. **(Currently Amended)** A grinding machine as claimed in ~~any of~~ claims 6 ~~to 8~~ wherein ~~further drive means~~ a nozzle drive is provided for positioning the nozzle ~~means~~ relative to the workpiece and the wheel~~[[,]]~~ to enable the nozzle to follow any movement of the point of contact between wheel and workpiece during grinding.
10. **(Currently Amended)** A grinding machine as claimed in ~~any of~~ claims 6 ~~to 9~~ further comprising a computer based control system wherein the control system is programmed to open the valve ~~means~~ and deliver liquid nitrogen coolant to and through the nozzle when the wheel is rotating and is in grinding contact with the workpiece, and to stop the delivery of the coolant when the wheel and workpiece are disengaged after grinding is completed.
11. **(Currently Amended)** A grinding machine as claimed in ~~any of~~ claims ~~5 to 10~~ 6 wherein the valve ~~means~~ includes a pressure ~~reducing means~~ reducer.
12. **(Currently Amended)** A machine as claimed in ~~any of~~ claims ~~6 5 to~~ 11 wherein the source is a pressure vessel and a pressure ~~sensing~~ ~~means~~ sensor is provided for generating a warning signal if the pressure in the vessel drops below a predetermined pressure.

13. **(Currently Amended)** A machine as claimed in claim 12 wherein the predetermined pressure is selected such that there is sufficient liquid nitrogen remaining in the vessel at that pressure, ~~as~~ to ensure that the grinding of a workpiece can be completed before the source is exhausted.
14. **(Currently Amended)** A machine as claimed in claim 12 ~~or 13~~ wherein an interlock is provided to prevent resumption of grinding unless the source is replaced or replenished.
15. **(Currently Amended)** A machine as claimed in ~~any of~~ claims 10 ~~to 14~~ wherein the control system controls the operation of the rotational drive and/or work support drive and/or the drive for rotating the wheel and/or the wheelhead drive **means**.
16. **(Currently Amended)** A machine as claimed in ~~any of~~ claims 10 ~~to 15~~ wherein the control system also controls the operation of the nozzle ~~further~~ drive ~~means so as~~ to adjust the position of the nozzle during grinding ~~so as~~ to follow the movement of the wheel relative to the workpiece during the grinding.
17. **(Currently Amended)** A machine as claimed in ~~any of~~ claims 6 ~~to 16~~ wherein the workpiece is a plate-like component and the workpiece support positions the component so that the edge thereof is presented to the grinding wheel for grinding.
18. **(Currently Amended)** A machine as claimed in ~~any of~~ claims 8 ~~to 16~~ wherein the workpiece has a flat ~~or profiled~~ surface which is to be

surface ground, and the workpiece support positions the workpiece so that the surface is generally horizontal and parallel to the X-axis of the machine.

19. **(Currently Amended)** A machine as claimed in ~~any of claims 5 to 18-6~~ wherein the workpiece is formed from glass.
20. **(New)** A machine as claimed in claim 8 wherein the workpiece has a profiled surface which is to be ground.